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File 158:DIOGENES(R) 1976-2002/Jul W3
         (c) 2002 DIOGENES
File 172:EMBASE Alert 2002/Jul W3
         (c) 2002 Elsevier Science B.V.
File 305:Analytical Abstracts 1980-2002/Jul W2
         (c) 2002 Royal Soc Chemistry
File 315:ChemEng & Biotec Abs 1970-2002/Jan
         (c) 2002 DECHEMA
File 342:Derwent Patents Citation Indx 1978-01/200209C
         (c) 2002 Thomson Derwent
File 345:Inpadoc/Fam.& Legal Stat 1968-2002/UD=200228
         (c) 2002 EPO
File 351:Derwent WPI 1963-2002/UD,UM &UP=200247
         (c) 2002  Thomson Derwent
File 357:Derwent Biotech Res. 1982-2002/June W1
         (c) 2002 Thomson Derwent & ISI
File 440:Current Contents Search(R) 1990-2002/Jul 26
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File 155:MEDLINE(R) 1966-2002/Jul W3
File   5:Biosis Previews(R) 1969-2002/Jul W3
         (c) 2002 BIOSIS
File  34:SciSearch(R) Cited Ref Sci 1990-2002/Jul W4
         (c) 2002 Inst for Sci Info
File  35:Dissertation Abs Online 1861-2002/Jun
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         (c) 2002  Elsevier Science B.V.
File  73:EMBASE 1974-2002/Jul W3
         (c) 2002 Elsevier Science B.V.
File  76:Life Sciences Collection 1982-2002/Jul
         (c) 2002 Cambridge Sci Abs
File 144:Pascal 1973-2002/Jul W3
         (c) 2002 INIST/CNRS
File 158:DIOGENES(R) 1976-2002/Jul W3
         (c) 2002 DIOGENES
File 172:EMBASE Alert 2002/Jul W3
         (c) 2002 Elsevier Science B.V.
File 305:Analytical Abstracts 1980-2002/Jul W2
         (c) 2002 Royal Soc Chemistry
File 315:ChemEng & Biotec Abs 1970-2002/Jan
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methods of detecting an analyte in a sample comprising employing the assay device or kit.

USE - The assay device and method are useful for detecting one or more analytes (e.g. hormones, antibodies or other physiological substances) in a variety of biological samples. In addition, the device can be used to simultaneously analyze a number of analytes using a single sample.

ADVANTAGE - The assay device achieves greater sensitivity than conventional rapid test assays, leading to stronger and/or more stable visual signals than those produced by conventional devices, easier interpretation of results, and reduced occurrence of indeterminate results. The device can be used for detecting analytes in biological samples without need for conventional sample filtration techniques, and thus is suitable for use by untrained personnel without specialized equipment.

DESCRIPTION OF DRAWING(S) - The drawing represents a simple illustration of an assay device.

Assay device (2)
Chromatographic element (4)
Absorbent pad (6)
Separator (8)
Sample receiving end (10)
Reagent releasing end (12)
Reaction zone (14).
pp; 23 DwgNo 1A/6

5/AB/2 (Item 2 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

013871461
WPI Acc No: 2001-355673/200137
XRAM Acc No: C01-110332
XRPX Acc No: N01-258401
New solid phase assay device enabling control over the timing of release of sample and assay liquid useful e.g. for testing for an analyte indicating a disease such as an allergy, inflammation or autoimmune disease
Patent Assignee: PHARMACIA DIAGNOSTICS AB (PHAA)
Inventor: BJOERKMAN R; MENDEL-HARTWIG I
Number of Countries: 022 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200136974	A1	20010525	WO 2000SE2243	A	20001115	200137	B
AU 200115655	A	20010530	AU 200115655	A	20001115	200152	

Priority Applications (No Type Date): SE 994175 A 19991118
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200136974	A1	E	19	G01N-033/543	

Designated States (National): AU CA JP
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

AU 200115655	A	G01N-033/543	Based on patent WO 200136974

Abstract (Basic): WO 200136974 A1
Abstract (Basic):

NOVELTY - A new solid phase assay device allows control over the timing of release of a sample and at least one other assay liquid into the device i.e. simultaneous initiation of flow or sequential flow in a

predetermined order.

DETAILED DESCRIPTION - The device comprises:

(i) a housing (1, 2);

(ii) a flow matrix (6) within the housing which allows liquid to be transported by capillary action and has at least one zone with immobilized capturing agent which can directly or indirectly bind the analyte;

(iii) a liquid container (13) for sample liquid;

(iv) at least one liquid container for liquid other than sample liquid; and

(v) a separation means (5) between flow matrix and liquid containers, mounted in a movable relationship with the liquid containers to prevent liquid contact with flow matrix in a first position and allow contact in a second position.

An INDEPENDENT CLAIM is also included for assaying for an analyte in a sample by flowing sample and assay liquids through a flow matrix to reach a reaction zone in the flow matrix in a predetermined sequence, using a device as above.

USE - The device is useful to perform assays for an analyte in a sample, e.g. an antibody or other protein, a hapten or a polynucleotide such as a DNA sequence; kits are provided (claimed). It is especially useful to test for an analyte (especially a specific immunoglobulin; claimed) indicating a disease such as an allergy, inflammation or autoimmune disease (claimed).

DESCRIPTION OF DRAWING(S) - The figure shows an assay device as claimed. Parts List: (1, 2) housing, (4) detection window, (5) separation means between flow matrix and liquid containers, (6) flow matrix, (13) liquid container for sample liquid.

pp; 19 DwgNo 1/6

5/AB/3 (Item 3 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

013824339
WPI Acc No: 2001-308551/200132
Related WPI Acc No: 2001-059637
XRAM Acc No: C01-095344
XRPX Acc No: N01-220821

Magnetic chromatography for bioassay, by applying magnetic field, such that suspended magnetic particles of reaction mixture that laterally cross chromatographic medium are captured, and analyzing captured particles

Patent Assignee: WAVESENSE LLC (WAVE-N)
Inventor: FEISTEL C
Number of Countries: 093 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200129559	A1	20010426	WO 2000US27452	A	20001005	200132	B
AU 200110734	A	20010430	AU 200110734	A	20001005	200148	

Priority Applications (No Type Date): US 2000668966 A 20000925; US 99418864 A 19991015
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200129559	A1	E	51	G01N-033/53	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
AU 200110734 A G01N-033/53 Based on patent WO 200129559

Abstract (Basic): WO 200129559 A1
Abstract (Basic):

NOVELTY - Magnetic chromatography method (M) for performing a bioassay is new.

DETAILED DESCRIPTION - (M) involves:

(1) providing a chromatographic medium (CM);

(2) providing a magnetic filed (MF);

(3) providing a reaction mixture (RM) suspected of containing an analyte, a reporter ligand that binds to the analyte immobilized on it suspended in it;

(4) contacting the chromatographic medium with the reaction mixture such that the reaction mixture flows laterally across the chromatographic medium;

(5) applying the magnetic field at a site upon the chromatographic medium, the magnetic field being so applied such that the magnetic particles suspended within the reaction mixture are cause to become substantially captured upon the medium at the site where the magnetic field is applied; and

(6) analyzing the majority magnetic particles captured upon the chromatographic medium.

INDEPENDENT CLAIMS are also included for the following:

(1) a magnetic chromatography test strip (I) for performing a bioassay, comprising:

(a) a test strip having a liquid receiving end, test membrane and liquid absorbent end formed in a generally linear fashion, the test membrane being disposed intermediate the liquid receiving end and the liquid absorbent end, such that the liquid receiving end, test membrane and liquid absorbent end cooperates to define a lateral direction of flow; and

(b) at least one magnet bound to the backing of the test strip; and

(2) a multimode photometer (II) for analyzing the presence of a chemical entity identified in a chromatographic medium, comprising:

(a) a base member having a channel formed within for receiving the chromatographic medium, the base member further having a magnetic source disposed within; and

(b) an opaque optical canopy formed upon the base, the optical canopy having at least one first surface through which electromagnetic radiation emanating from an external source may be transmitted, the first surface being designed to align with the chromatographic medium and the magnetic source disposed within the base such that the electromagnetic radiation may be focused upon it, the optical canopy having at least one second surface through which electromagnetic radiation reflected or emitted from the chromatographic medium received within the channel of the base may be detected.

USE - The method is useful for performing bioassays (claimed).

ADVANTAGE - Bioassays can be performed with accuracy and precision, like that of conventional laboratory formats while retaining the operational simplicity, rapid analysis, and cost effectiveness like that of test formats. The method minimizes the problems associated with the manufacture of a test strip which incorporate preapplied capture lines and further, can enable an analyte to be detected in a fluid sample in a manner that efficiently conserves and isolates the analyte present in the sample. Multimode photometers, test strip devices, and unique analysis method represent a versatile, cost effective, simple and accurate system which can quantify the amount of the chemical substance present in the sample that has not been available through conventional bioassay test strips.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of an assay test strip for use in bioassay methods.
pp; 51 DwgNo 1/6

5/AB/4 (Item 4 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

013707565
WPI Acc No: 2001-191789/200119
XRAM Acc No: C01-057612
XRPX Acc No: N01-136268
New membrane, useful for simultaneously detecting multiple tick-borne diseases, comprises 3 immobilized binding members containing antigen derived from Babasia microti, human granulocyte Ehrlichiae and Borrelia burgdorferi
Patent Assignee: IMMUNETICS INC (IMMU-N)
Inventor: LEVIN A E
Number of Countries: 085 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200120325	A1	20010322	WO 99US21814	A	19990920	200119	B
AU 9960540	A	20010417	AU 9960540	A	19990920	200140	

Priority Applications (No Type Date): US 99398162 A 19990916
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200120325	A1	E	27	G01N-033/53	

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9960540	A		G01N-033/53	Based on patent WO 200120325

Abstract (Basic): WO 200120325 A1
Abstract (Basic):
NOVELTY - A membrane (I) for use in a flow-through assay comprising at least 3 binding members (II) immobilized on (I), each being specific for a distinct analyte of interest (III) and an intensity indicator to permit determination of a positive result threshold level for (III), where a positive result is indicative of coupling between (II) to (III), is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) an apparatus (IV) for use in a flow-through assay comprising:
(a) an upper plate with at least one channel extending from a first surface to a second surface of the upper plate;
(b) a lower plate for receiving the upper plate, which is capable of engaging a vacuum source;
(c) (I) positioned between the upper and lower plate; and
(d) a wicking member positioned between (I) and lower plate, which is capable of distributing and absorbing a liquid uniformly through (I);
(2) a flow-through assay comprising:
(a) providing (IV);
(b) introducing a test sample through the channels to the surface of (I);
(c) flushing the test sample through (I) to remove any analytes in

the sample not bound to the binding members; and
(d) analyzing the results presented on (I); and
(3) a diagnostic kit comprising (I).
USE - (I) is useful for simultaneously detecting multiple tick-borne diseases in human serum (claimed) such as Lyme disease, human granulocyte ehrlichiosis and babesiosis.
ADVANTAGE - A complete immunoassay can be performed in approximately 15 minutes using (I) instead of several hours as seen with conventional Western Blot methodology. A sample can be tested simultaneously for the presence of antibodies to Babasia microti, human granulocyte Ehrlichiae (HGE) and Borrelia burgdorferi using the assay.
pp; 27 DwgNo 0/7

5/AB/5 (Item 5 from file: 351)
DIALOG(R)File 351:Derwent WPI
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013628131
WPI Acc No: 2001-112339/200112
XRAM Acc No: C01-033385
XRPX Acc No: N01-082485
Preparation of liposome-loaded test devices for detection of analytes, includes use of a sugar which stabilizes the liposomes on dehydration and improves recovery of intact liposomes
Patent Assignee: CORNELL RES FOUND INC (CORR)
Inventor: DURST R A; MARTORELL-PENA D; SIEBERT S T A
Number of Countries: 091 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200079283	A1	20001228	WO 2000US17356	A	20000623	200112	B
AU 200056357	A	20010109	AU 200056357	A	20000623	200122	
EP 1192466	A1	20020403	EP 2000941685	A	20000623	200230	
			WO 2000US17356	A	20000623		

Priority Applications (No Type Date): US 99140572 P 19990623
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200079283	A1	E	53	G01N-033/58	
AU 200056357	A			G01N-033/58	Based on patent WO 200079283
EP 1192466	A1	E		G01N-033/58	Based on patent WO 200079283

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

Abstract (Basic): WO 200079283 A1
Abstract (Basic):
NOVELTY - Making a test device for detecting or quantifying an analyte in a sample, comprising contacting a membrane with a mixture containing derivatized, marker-loaded liposomes (DMLL) and sugars to promote stability of the DMLLs during dehydration and rehydration, and dehydrating the mixture on the membrane under vacuum pressure at 4-80 degrees C, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a test device for detecting or quantifying an analyte in a

sample, comprising a membrane having an immobilized liposome zone (ILZ) bound to dehydrated DMLLs, which are dehydrated under vacuum pressure at 4-80 degrees C from a mixture also comprises sugars to promote stability of the DMLLs during dehydration and rehydration;

(2) detecting or quantifying an analyte in a sample, comprising:

(a) providing a membrane which comprises:

(i) an ILZ of (1), in which the dehydrated DMLLs are derivatized with an analyte analog; and

(ii) a capture zone (CZ) which has a binding material (1BM) specific for the analyte;

(b) contacting the test device with a solution of the sample;

(c) allowing the solution to migrate through the ILZ, the solution rehydrates the dehydrated DMLLs which migrate by capillary action, with the solution, into the CZ;

(d) permitting any competition to occur between any analyte present in the sample and the DMLLs for the 1BM;

(e) detecting or quantifying the DMLLs in the CZ; and

(f) correlating the presence or amount of the DMLLs with the presence or amount of the analyte in the sample; and

(3) detecting or quantifying an analyte in a sample, comprising:

(a) providing a membrane having:

(i) a CZ which has a binding material (1BM) specific for the analyte; and

(ii) an ILZ of (1), in which the dehydrated DMLLs are derivatized with a second binding material (2BM) specific for the analyte, where 1BM binds with a portion of the analyte other than a portion of the analyte for which the 2BM is selected;

(b) contacting the test device with a solution of the sample;

(c) allowing the solution to migrate through the ILZ, where the solution rehydrates the dehydrated DMLLs which migrate by capillary action, with the solution, into the CZ;

(d) detecting or quantifying the DMLLs in the CZ; and

(e) correlating the presence or amount of the DMLLs with the presence or amount of the analyte in the sample.

USE - The test devices can be used for detection and quantification of a wide variety of analytes, including environmental and food contaminants (e.g. pesticides or toxic chemicals), drugs, hormones, proteins, receptors, antibodies, prions, steroids, bacteria, fungi, viruses, parasites, allergens or products or components of normal or malignant cells. They can be used to determine relative antibody affinities, for relative nucleic acid hybridization experiments or for restriction enzyme assays.

ADVANTAGE - The devices can be used directly in the field, and are generally less complex than prior art materials. The presence of the sugar dramatically improves recovery of intact liposomes upon rehydration.

DESCRIPTION OF DRAWING(S) - The figure shows a test device for detecting and quantifying a sample analyte.

Capture zone (206)
Test sample (208)
Holding tray (210)
Membrane (212)
Support (214)
Immobilized liposome zone (216).
pp; 53 DwgNo 1/8

5/AB/6 (Item 6 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

012966842
WPI Acc No: 2000-138691/200013
XRAM Acc No: C00-042821
XRPX Acc No: N00-103751
New colorimetric detection device, useful for determining presence or concentration of analytes in fluid sample
Patent Assignee: BAYER CORP (FARB); MILES LAB INC (MILE)
Inventor: ALBARELLA J P; HILDENBRAND K; LIN S H; PUGIA M J; SCHULMAN L S
Number of Countries: 029 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 977034	A2	20000202	EP 99113655	A	19990714	200013 B
AU 9941102	A	20000217	AU 9941102	A	19990723	200019
JP 2000046826	A	20000218	JP 99207731	A	19990722	200020
CA 2270797	A1	20000127	CA 2270797	A	19990504	200028
US 6187268	B1	20010213	US 98123225	A	19980727	200111
			US 99405116	A	19990927	

Priority Applications (No Type Date): US 98123225 A 19980727; US 99405116 A 19990927
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 977034	A2	E	7	G01N-033/52	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
AU 9941102	A			G01N-033/52	
JP 2000046826	A		7	G01N-033/52	
CA 2270797	A1	E		G01N-033/52	
US 6187268	B1			C12Q-001/68	Cont of application US 98123225

Abstract (Basic): EP 977034 A2
Abstract (Basic):
NOVELTY - A test device (I) for the colorimetric detection of an analyte (II) in a test fluid, is new and comprises a dry reagent layer (III) capable of detecting (II) which is overcoated with a transparent, fluid permeable, swellable membrane (IV) comprising a blend of an aqueous based polymer dispersion and a water soluble polymer.
USE - (I) is useful for determining the presence or concentration of an analyte in a fluid test sample, by contacting (I) with the sample and correlating a color change in (III) with the presence or concentration of the analyte (claimed). (I) is especially useful for testing creatinine in urine, and for urine occult blood tests.
ADVANTAGE - Prior art analytical devices using dry reagent systems provide poor immunological separation, with limited time for reaction to take place. Tests for urine creatinine may exhibit instability due to incompatible chemicals. (I) alleviates the problems associated with dry assays as it overcoats the dry reagent device with a permeable transparent membrane . Prior art devices have also involved the use of a discrete stacked layer configuration to separate the reagents, but these devices require formats to hold layers together and these are difficult to manufacture and may not efficiently prevent migration of reagents between the layers. The permeability of (IV) can be adjusted to control the speed of flow or mixing of reagents and therefore solves the above problems.
pp; 7 DwgNo 0/0

5/AB/7 (Item 7 from file: 351)
DIALOG(R)File 351:Derwent WPI
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012712283
WPI Acc No: 1999-518396/199943
XRAM Acc No: C99-151300
XRPX Acc No: N99-385560
Detecting the level of immuno-protective antibody in a vertebrate
Patent Assignee: SYNBIOTICS CORP (SYNB-N)
Inventor: CUTTING J A
Number of Countries: 019 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9940438	A1	19990812	WO 99US1511	A	19990125	199943	B

Priority Applications (No Type Date): US 9818072 A 19980203
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9940438	A1	E	52	G01N-033/543	

Designated States (National): JP
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Abstract (Basic): WO 9940438 A1
Abstract (Basic):

NOVELTY - A method (A) of determining the presence of an immuno-protective level of antibody in a vertebrate comprising applying a volume of blood sample obtained from the vertebrate to a chromatographic device to detect the presence of any bound antibody, is new.

DETAILED DESCRIPTION - The method comprises:

(a) providing a chromatographic device having a first detection zone and a second detection zone;

(b) applying a volume of blood sample obtained from the vertebrate to the chromatographic device;

(c) allowing the sample to move through the first detection zone and then the second detection zone, where an amount of the antibody corresponding to the immuno-protective level of the antibody is bound to the first detection zone and at least a portion of the remaining antibody which passes the first detection zone is bound to the second detection zone; and

(d) observing the second detection zone to detect the presence of the bound antibody, where the presence of the bound antibody indicates that the vertebrate has an immuno-protective level of the antibody.

INDEPENDENT CLAIMS are also included for:

(1) a chromatographic device for determining the presence of an immuno-protective level of antibody in a vertebrate, comprising:

(i) chromatographic medium;

(ii) sample application pad on the chromatographic medium; and

(iii) a first detection zone and a second detection zone on the chromatographic medium, wherein the first and second detection zones contain the same immobilized antigen capable of binding specifically to the antibody, and the first detection zone contains an amount of antigen capable of binding to an amount of antibody corresponding to the immuno-protective level of the antibody;

(2) a chromatographic device with internal standardization for determining the immune status of a vertebrate, comprising:

(a) an elongated immuno-chromatographic membrane having a first end, a second end, and an upper surface;

(b) a sample catch zone in the membrane capable of specifically binding to a target analyte in a blood sample of the vertebrate;

(c) a first control zone in the membrane capable of specifically binding a predetermined amount of a universal signal-generating conjugate; and

(d) a second control zone in the membrane capable of specifically binding a predetermined amount of the universal signal-generating conjugate;

(3) a system for determining the immune status of a vertebrate and preparing a multi-component vaccine, comprising:

(a) a chromatographic device for determining the presence of an immuno-protective level of antibodies in a vertebrate,

(b) an apparatus for preparing corresponding univalent vaccines and formulating them into the multi-component vaccine; and

(c) an interface between the chromatographic device and the apparatus for receiving immune status information from the chromatographic device and sending the information to the apparatus to direct automatic preparation of the multi-component vaccine;

(4) a water-soluble conjugate comprising a dextran polymeric carrier molecule having at least two molecular species covalently attached via a linking group derived from divinyl sulfone.

USE - The method is used to detect antibody specific to canine parvovirus (CPV), canine adenovirus types I and 11 (CAV), rabies virus (RV), canine distemper virus (CDV), canine parainfluenza virus (CPIV), Leptospirosis species, canine coranavirus (CCV), Bordatella brochiseptica, Borellia burgdorferi, canine heartworm, feline panleukopenia parvovirus (FPLV), feline calicivirus (FCV), feline leukemia virus (FeLV), feline rhinotracheitis virus (FRV), Chlamydia psittaci, feline infectious peritonitis virus (FIPV), feline immunodeficiency virus (FIV), Haemobartonella felis, Bartonella henselae, ringworm and fleas (all claimed).

pp; 52 DwgNo 0/7

5/AB/8 (Item 8 from file: 351)
DIALOG(R)File 351:Derwent WPI
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012622677
WPI Acc No: 1999-428781/199936
Related WPI Acc No: 1991-275752; 2001-638044
XRAM Acc No: C99-126319
XRPX Acc No: N99-319089
Device for heterogeneous ligand-receptor assay
Patent Assignee: BIOSITE DIAGNOSTICS INC (BIOS-N)
Inventor: ANDERSON R R; BUECHLER K F; NOWAKOWSKI M R; VALKIRS G E
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5922615	A	19990713	US 90500299	A	19900312	199936 B
			US 92961267	A	19921014	
			US 95380145	A	19950127	
			US 95458276	A	19950602	

Priority Applications (No Type Date): US 92961267 A 19921014; US 90500299 A 19900312; US 95380145 A 19950127; US 95458276 A 19950602
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5922615	A		26	G01N-033/543	CIP of application US 90500299
					Cont of application US 92961267
					Cont of application US 95380145

Abstract (Basic): US 5922615 A
Abstract (Basic):

NOVELTY - The device comprises a porous capture membrane in contact with a non- absorbent capillary network.

DETAILED DESCRIPTION - The device has

(a) a porous membrane having (i) at least one binding agent capable of immobilising a target ligand form a fluid sample, and (ii) a detector for detecting the presence or amount of the ligand, and

(b) a non- absorbent member in fluid communication with the porous member, the non- absorbent member forming at least one capillary with the porous member so that when the sample, optionally in combination with other fluids, is added to the porous member, fluid is drawn through the porous member.

An INDEPENDENT CLAIM is included for a method of assaying a target ligand using the device.

USE - The device is used for solid phase assays for qualitative, semi-quantitative or quantitative determinations of one or more analytes within a single test format. It can be used for the in-vitro determination of the presence and/or concentration of ligands in body fluids, food products and environmental samples. Typically specific hormones, proteins, therapeutic drugs and toxins can be determined.

ADVANTAGE - The device allows the efficient use of reagents while incurring a minimum number of steps in the assay protocol. It allows the use of a large porous membrane covered with multiple ligand receptor zones. The non- absorbent membrane ensures good separation of free from bound labeled conjugate.

DESCRIPTION OF DRAWING(S) - The drawing shows a section view of the device.

pp; 26 DwgNo 9/13

5/AB/9 (Item 9 from file: 351)
DIALOG(R)File 351:Derwent WPI
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012471203
WPI Acc No: 1999-277311/199923
Related WPI Acc No: 2000-147215
XRAM Acc No: C99-081479
XRPX Acc No: N99-207866

Test strip containing membrane that retains substances that impede migration

Patent Assignee: UCB SA (UNIO); UCB-BIOPRODUCTS SA (UNIO)
Inventor: DEGELAEN J; GRANIER B; FRERE J; JORIS B
Number of Countries: 084 Number of Patents: 017
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9918439	A1	19990415	WO 98BE147	A	19981006	199923	B
AU 9894248	A	19990427	AU 9894248	A	19981006	199936	
BE 1011487	A3	19991005	BE 97807	A	19971007	199950	
EP 1023603	A1	20000802	EP 98947242	A	19981006	200038	
			WO 98BE147	A	19981006		
NO 200001817	A	20000407	WO 98BE147	A	19981006	200039	
			NO 20001817	A	20000407		
BR 9812876	A	20000808	BR 9812876	A	19981006	200044	
			WO 98BE147	A	19981006		
CZ 200001059	A3	20000913	WO 98BE147	A	19981006	200054	
			CZ 20001059	A	19981006		
CN 1274423	A	20001122	CN 98809987	A	19981006	200116	
KR 2001024457	A	20010326	KR 2000703770	A	20000407	200161	
NZ 503430	A	20010928	NZ 503430	A	19981006	200161	
			WO 98BE147	A	19981006		
AU 737906	B	20010906	AU 9937032	A	19990330	200162	
AU 738143	B	20010913	AU 9894248	A	19981006	200164	
KR 2001034916	A	20010425	KR 2000714639	A	20001222	200164	

CN 1311857	A	20010905	CN 99809405	A	19990330	200201
JP 2001519533	W	20011023	WO 98BE147	A	19981006	200202
			JP 2000515181	A	19981006	
MX 2000012583	A1	20010501	MX 200012583	A	20001215	200227
MX 2000003325	A1	20010601	MX 20003325	A	20000405	200235

Priority Applications (No Type Date): BE 98485 A 19980625; BE 97807 A 19971007

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9918439	A1	F	37	G01N-033/558	
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
AU 9894248	A				Based on patent WO 9918439
BE 1011487	A3			G01N-000/00	
EP 1023603	A1	F		G01N-033/558	Based on patent WO 9918439
Designated States (Regional): AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
NO 200001817	A			G01N-000/00	
BR 9812876	A			G01N-033/558	Based on patent WO 9918439
CZ 200001059	A3			G01N-033/558	Based on patent WO 9918439
CN 1274423	A			G01N-033/558	
KR 2001024457	A			G01N-033/558	
NZ 503430	A			G01N-033/558	Based on patent WO 9918439
AU 737906	B			C12Q-001/00	Previous Publ. patent AU 9937032 Based on patent WO 9967416
AU 738143	B			G01N-033/558	Previous Publ. patent AU 9894248 Based on patent WO 9918439
KR 2001034916	A			C12Q-001/00	
CN 1311857	A			G01N-033/566	
JP 2001519533	W		43	G01N-033/543	Based on patent WO 9918439
MX 2000012583	A1			C12Q-001/00	
MX 2000003325	A1			G01N-033/543	

Abstract (Basic): WO 9918439 A1

Abstract (Basic):

NOVELTY - Inclusion, in a device for detecting analytes (I) in liquid dairy products, of a purification membrane that retains substances in the sample which inhibit migration, in the device, of (I) and of the detection reagents used.

DETAILED DESCRIPTION - The detection device comprises a solid support (1) having attached to it, in sequence from the end where sample is applied, the purification membrane (2), a membrane (3) containing immobilized capture reagents and an absorbent membrane (4). A sample applied to one end of the device undergoes tangential capillary migration. INDEPENDENT CLAIMS are also included for the following: (a) detecting (I) using the new device; (b) preparation of the device; and (c) kits containing the device.

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - The devices are especially used to detect antibiotics and hormones in milk.

ADVANTAGE - The device provides sensitive and reliable results rapidly and requires only a few simple operations. It generates a visible result directly (no further manipulations required) and this may be quantified instrumentally. It can be adapted for different sorts of (I).

DESCRIPTION OF DRAWING(S) - Test strip showing purification membrane (2); membrane carrying detection reagent (5); membrane carrying capture reagent (3); absorbent pad (4); protective cover (6) and support (1).
pp; 37 DwgNo 3/3

5/AB/10 (Item 10 from file: 351)
DIALOG(R)File 351:Derwent WPI
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011590329
WPI Acc No: 1998-007458/199801
XRAM Acc No: C98-002576
XRPX Acc No: N98-005888
Assay device for one step detection of analytes in sample - comprises fluid-contacting membrane containing mobilisable label, matrix containing detection zone and absorbent
Patent Assignee: QUIDEL CORP (QUID-N)
Inventor: BACQUET C A; PAWLAK J W; PRONOVOST A D; SAND T T
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5686315	A	19971111	US 91714906	A	19910614	199801	B
			US 92967968	A	19921027		
			US 94184354	A	19940121		

Priority Applications (No Type Date): US 91714906 A 19910614; US 92967968 A 19921027; US 94184354 A 19940121
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5686315	A		6	G01N-033/53	Cont of application US 91714906
					Cont of application US 92967968

Abstract (Basic): US 5686315 A
Assay device for one-step detection of the presence or absence of an analyte in a sample, comprises:
(a) a removable, fluid-contacting membrane (to which the sample is applied) containing a mobilisable label, in fluid communication with, and on top of,
(b) a matrix, which is in fluid communication with, and on top of,
(c) an absorbent capable of drawing liquids applied to the device through the membrane and the matrix.
The label comprises a visible moiety coupled to a ligand. The ligand specifically binds the analyte, or competes with the analyte for a specific binding partner (sbp) to the analyte. The matrix contains a detection zone on which the sbp to the analyte is immobilised .
USE - The device may be used in specific binding assays,especially immunoassays, e.g. for detection of human chorionic gonadotropin.
Dwg.0/0

5/AB/11 (Item 11 from file: 351)
DIALOG(R)File 351:Derwent WPI
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010323167
WPI Acc No: 1995-224441/199529
Related WPI Acc No: 1992-433819; 1995-106547; 1995-224442; 1997-034502;

1997-034507; 1997-372069; 2000-135973; 2000-204492
XRAM Acc No: C95-103257
XRPX Acc No: N95-175936
Chromatographic device for specific binding assay - uses a barrier, having an aperture, to control delivery of sample and reagent, provides improved accuracy and precision
Patent Assignee: SMITHKLINE DIAGNOSTICS INC (SMIK)
Inventor: CHANDLER H M
Number of Countries: 059 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9516207	A1	19950615	WO 94US13982	A	19941206	199529	B
AU 9512659	A	19950627	AU 9512659	A	19941206	199541	
EP 733210	A1	19960925	WO 94US13982	A	19941206	199643	
			EP 95903681	A	19941206		
US 5607863	A	19970304	US 91706639	A	19910529	199715	
			US 92888831	A	19920527		
			US 9340430	A	19930331		
			US 93163860	A	19931207		
ZA 9501129	A	19970430	ZA 951129	A	19950213	199723	N
JP 9506434	W	19970624	WO 94US13982	A	19941206	199735	
			JP 95516271	A	19941206		
AU 692205	B	19980604	AU 9512659	A	19941206	199839	
CN 1142868	A	19970212	CN 94194972	A	19941206	200050	

Priority Applications (No Type Date): US 93163860 A 19931207; US 91706639 A 19910529; US 92888831 A 19920527; US 9340430 A 19930331; ZA 951129 A 19950213
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9516207	A1	E	185	G01N-033/558	
Designated States (National): AM AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB GE HU JP KE KG KP KR KZ LK LT LU LV MD MG MN MW NL NO NZ PL PT RO RU SD SE SI SK TJ TT UA US UZ VN					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ					
AU 9512659	A				Based on patent WO 9516207
EP 733210	A1	E			Based on patent WO 9516207
Designated States (Regional): BE CH DE ES FR GB IT LI NL SE					
US 5607863	A			G01N-033/543	CIP of application US 91706639 CIP of application US 92888831 CIP of application US 9340430
ZA 9501129	A		183	A61K-000/00	
JP 9506434	W		145	G01N-033/543	Based on patent WO 9516207
AU 692205	B				Previous Publ. patent AU 9512659 Based on patent WO 9516207
CN 1142868	A			G01N-033/558	

Abstract (Basic): WO 9516207 A

Assay device for detection and/or determn. of an analyte (A) comprises: (a) a chromatographic medium (CM) having a specific binding partner (SBP) for (A) immobilised in a detection zone (DZ); (b) at least 1 absorber in contact with an end of the CM; and (c) fluid-impermeable barrier over one surface of the CM having an aperture for application of liq. to the CM. The various components are arranged so that an applied samples is drawn through the CM to the absorber so that any (A) and a detection reagent (DR) form a ternary complex with SBP in the DZ. Many variations of this device are also claimed: (1) an appts. with the presence of an applicator (on the barrier) contg. a labelled DR that is resolubilised by applied liq.; (ii) the use of 2 opposable elements, with the second element being used to apply a

reactant, to supply a sample pretreatment zone or to carry the applicator; (iii) the presence of a filter (on the barrier) to eliminate particulates, or of a distribution membrane ; (iv) the use of the second component as receptable for a swab contg. the test sample; (v) the presence of an affinity membrane (carrying immobilised SBP); and (vi) the control zone present in CM (having an analyte or its analogue immobilised in it), etc.. Also claimed are test kits contg. such devices and an aq. soln. of labelled DR.

USE - The device is used to perform immunoassays, opt. with signal amplification, e.g. for detection of lipopolysaccharides, haemoglobin (in faeces), antibodies to Helicobacter pylori etc.. More generally any other specific binding assays (e.g. lectin or receptor plus ligand; enzyme plus inhibitor or substrate, complementary nucleic acids) can be done.

ADVANTAGE - The devices do not require use of extn. vessels or transfer devices and can be presented as test strips, The method allows coloured or turbid samples to be tested without interference and ensures even and uniform sample delivery (to improve accuracy and precision). The appts. can be used for 2-dimensional assays in clinical laboratories or physician's offices. Assay times and sample/reagent consumption are reduced as are background signals for enzyme immunoassays. Devices based on 2 opposable elements provide confinement of potentially contaminated samples.

Dwg.18/18

Abstract (Equivalent): US 5607863 A

A chromatographic assay device for detection and/or determination of an analyte in a test sample comprising:

(a) a first opposable component including:

(i) a chromatographic medium having a first end, a second end, and first and second surfaces, and having a specific binding partner for the analyte immobilized thereon in a detection zone between the first and second ends of the chromatographic medium;

(ii) at least one absorber in operable contact with at least one of the first and second ends of the chromatographic medium; and

(iii) a substantially fluid-impermeable barrier layered on top of the first surface of the chromatographic medium and having an aperture for application of liquid to the chromatographic medium, the barrier at least partially blocking application of liquid to the chromatographic medium; and

(b) a second opposable component containing at least one reactant for applying the at least one reactant directly or indirectly to the chromatographic medium through the aperture; wherein the first and second opposable components are configured so that bringing the first and second opposable components into opposition results in the second opposable component applying the at least one reactant directly or indirectly to the chromatographic medium through the aperture

5/AB/12 (Item 12 from file: 351)
DIALOG(R)File 351:Derwent WPI
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009424219
WPI Acc No: 1993-117735/199314
Related WPI Acc No: 1991-232053; 1992-349371; 1995-131458
XRAM Acc No: C93-052352
XRPX Acc No: N93-089697
Assay device for analytes, partic. drugs - has reaction zone and control zone to establish identity of test subject
Patent Assignee: LA MINA LTD (LMIN-N); MINA LTD (MINA-N); LAMINA LTD (LAMI-N)

Inventor: GUIRGUIS R A
Number of Countries: 020 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9306486	A1	19930401	WO 92US7785	A	19920914	199314	B
AU 9226643	A	19930427	AU 9226643	A	19920914	199332	
			WO 92US7785	A	19920914		
US 5244815	A	19930914	US 90467532	A	19900119	199338	
			US 91668115	A	19910312		
			US 91759922	A	19910913		
EP 643834	A1	19950322	EP 92920466	A	19920914	199516	
			WO 92US7785	A	19920914		
JP 7503536	W	19950413	WO 92US7785	A	19920914	199523	
			JP 93506167	A	19920914		
AU 9714931	A	19970522	AU 9226643	A	19920914	199729	
			AU 9714931	A	19970226		
EP 643834	B1	20000816	EP 92920466	A	19920914	200040	
			WO 92US7785	A	19920914		
DE 69231362	E	20000921	DE 631362	A	19920914	200055	
			EP 92920466	A	19920914		
			WO 92US7785	A	19920914		

Priority Applications (No Type Date): US 91759922 A 19910913; US 90467532 A 19900119; US 91668115 A 19910312
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9306486	A1	E	60	G01N-033/543	
Designated States (National): AU CA JP US					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL SE					
AU 9226643	A				Based on patent WO 9306486
US 5244815	A		21	G01N-033/545	CIP of application US 90467532
					CIP of application US 91668115
EP 643834	A1	E			Based on patent WO 9306486
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL SE					
JP 7503536	W			G01N-033/543	Based on patent WO 9306486
AU 9714931	A			G01N-033/543	Div ex application AU 9226643
EP 643834	B1	E		G01N-033/543	Based on patent WO 9306486
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL SE					
DE 69231362	E			G01N-033/543	Based on patent EP 643834
					Based on patent WO 9306486

Abstract (Basic): WO 9306486 A

(A)Assay device comprises a reaction medium having at least one reaction zone and at least one control zone including a member of a ligand/receptor pair, where the control zone is capable of establishing the identiy of a test subject.

USE/ADVANTAGE - Device allows the detection of a presence or absence of an analyte in a sample, as well as specifically identifying the person providing the sample. Used partic. for analytes e.g. cocaine, benzoylecgonine, opiates, phencyclidine, amphetamine, methamphetamine, tetrahydrocannabinol and alcohol.

In an example, a low protein binding polysulphone membrane was rinsed with blocking buffer. Central well of the device (control zone 16) was spotted with a dilute soln. of polystyrene latex coated with goat anti-mouse immunoglobulin 4 in PBS contg. 4% sucrose, 1% BSA and 0.05% azide. Reaction zone was spotted with a dilute soln. of polystyrene latex coated with human serum albumin (HSA)-benzoylecgonine (BE). The membrane was then dried. A saliva sample was mixed with

mouse anti-BE Igle in buffer and applied to the device . Finger of a person who had provided the saliva sample was printed with 15 microl of a dil. soln. of colloidal gold conjugated goat anti-mouse Igle. Finger was gently pressed against the device then rolled off. Device provided a detection of the presence of BE and the fingerprint of the person giving the samp

Dwg.1/10

Abstract (Equivalent): US 5244815 A

Finger print and drug testing pad comprises a plastic absorbent pad on which is mounted a membrane contg. immobilised ligands that are specific receptor sites for drug or metabolite antigens in numerous discrete regions of the membrane . Testing comprises mixing a body fluid sample with an aq. soln. contg. antibody to a given analyte ; and placing the mixt. on the membrane surface; also, the finger of the subject is coated with a film of labelled antibody, and the finger is placed in contact with the membrane at the zone contg. immobilised ligand that is specific for the labelled antibody. The formation of antibody-antigen complexes is a positive result for a given analyte , and the fingerprint obtd. identifies the subject.

USE - The process faciliates rapid forensic analysis or clinical diagnosis.

Dwg. 15/15

5/AB/13 (Item 13 from file: 351)

DIALOG(R)File 351:Derwent WPI

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009324777

WPI Acc No: 1993-018241/199302

XRAM Acc No: C93-008369

XRPX Acc No: N93-013881

Detection or determn. of analyte antibody in fluid sample - using antigen conjugated to label and same antigen immobilised on solid phase

Patent Assignee: PACIFIC BIOTECH INC (PACI-N)

Inventor: TZENG S; WANG D

Number of Countries: 021 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9222797	A2	19921223	WO 92US3680	A	19920505	199302	B
AU 9222471	A	19930112	AU 9222471	A	19920505	199317	
EP 588958	A1	19940330	EP 92914168	A	19920505	199413	
			WO 92US3680	A	19920505		
JP 6508689	W	19940929	WO 92US3680	A	19920505	199443	
			JP 93500852	A	19920505		
WO 9222797	A3	19930401	WO 92US3680	A	19920505	199512	

Priority Applications (No Type Date): US 91715119 A 19910614; US 91715407 A 19910613

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9222797	A2	E	34	G01N-000/00	
Designated States (National): AU CA FI JP KR NO					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LU MC NL SE					
AU 9222471	A			G01N-033/558	Based on patent WO 9222797
EP 588958	A1	E		G01N-033/558	Based on patent WO 9222797
Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE					
JP 6508689	W			G01N-033/543	Based on patent WO 9222797
WO 9222797	A3			G01N-000/00	

Abstract (Basic): WO 9222797 A

(A) An analytical device for the detection or determn. of an analyte antibody in a body fluid is claimed comprising a layer of planar zones adjacent to one another and in absorbent contact with one another, the layer including: (a) a sample application zone, (b) a conjugate zone contg. antigen bound to mobile particles and (c) a detection zone contg. immobilised antigen, where the antigen is the same in both the conjugate and detection zones and is an antigen that binds with analyte antibody, the liquid sample is capable of moving from the sample application zone through the conjugate zone and on to the detection zone, and if the analyte antibody is present in the sample it is detected in the detection zone. Pref. the layer is made from nitrocellulose . The mobile particles may be e.g. coloured polystyrene microparticles. Also claimed are: (B) a process for the detn. of the presence or concn. of an analyte antibody in a fluid which comprises (a) contacting a sample of the fluid a first antigen for the analyte antibody, where the first antigen is labelled, to form a soluble complex between the first antigen and the analyte antibody, (b) contacting the soluble complex with a second antigen which is bound to a solid phase insoluble in the fluid to form an insoluble complex of the first antigen, the analyte antibody and the second antigen, (c) sepg. the solid phase from the fluid sample and the unreacted first antigen, (d) measuring either the first, labelled antigen associated with the solid phase or the unreacted amt. of the first labelled antigen, (e) relating the amt. of first labelled antigen measured for a control sample prepd. as in (a)-(d), the control sample being free of analyte antibody, to determine the presence of analyte antibody in the fluid sample, or relating the amt. of first labelled antigen measured for the fluid sample with the amt. of labelled antigen measured for samples contg. known amts. of analyte antibody prepd. as in (a)-(d) to determine the concn. of the analyte antibody in the fluid sample; where both the first and second antigens are the same before they are labelled or attached to the solid phase, respectively.

USE/ADVANTAGE - The methods and devices can be used for the sensitive assay of analyte antibodies, partic. antibodies to Borrelia burgdorfi (Bb) in the diagnosis of Lyme disease. They avoid the agglomeration problems of other assays, thereby providing improved accuracy and greater resolution.

(Dwg.0/0

5/AB/14 (Item 14 from file: 351)
DIALOG(R)File 351:Derwent WPI
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008682344
WPI Acc No: 1991-186363/199126
XRAM Acc No: C91-080643
XRPX Acc No: N91-142871
Device for migration type immunoassay - includes filter zone to control liq. flow and retain blood cells, etc., between sample reception and result display zones
Patent Assignee: MIWON CO LTD (MIWO-N); PRINCETON BIOMEDITECH CORP (PRIN-N) ; PRINCETON BIOMED CO (PRIN-N); PMB SELFCARE LLC (PMBS-N)
Inventor: KANG J; OH Y H; YOUN B
Number of Countries: 008 Number of Patents: 017
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 4037724	A	19910620	DE 4037724	A	19901127	199126	B
GB 2239313	A	19910626	GB 9026221	A	19901203	199126	
GB 2239314	A	19910626	GB 9026222	A	19901203	199126	

AU 9063106	A	19910620				199132
FR 2656101	A	19910621	FR 9013894	A	19901109	199135
JP 4289456	A	19921014	JP 90412005	A	19901218	199248
US 5252496	A	19931012	US 89456982	A	19891218	199342
GB 2239313	B	19940323	GB 9026221	A	19901203	199409
GB 2239314	B	19940518	GB 9026222	A	19901203	199417
IT 1240536	B	19931217	IT 9067625	A	19900808	199417
CH 684130	A5	19940715	CH 903938	A	19901212	199427
CH 684715	A5	19941130	CH 903938	A	19901212	199501
			CH 94766	A	19901212	
US 5559041	A	19960924	US 89456982	A	19891218	199644
			US 9370803	A	19930603	
US 5728587	A	19980317	US 89456982	A	19891218	199818
			US 9370803	A	19930603	
			US 96659937	A	19960607	
JP 2977616	B2	19991115	JP 90412005	A	19901218	199954
JP 11337553	A	19991210	JP 90412005	A	19901218	200009
			JP 99127121	A	19901218	
US 6027943	A	20000222	US 89456982	A	19891218	200017
			US 9370803	A	19930603	
			US 96659937	A	19960607	
			US 97970425	A	19971114	

Priority Applications (No Type Date): US 89456982 A 19891218; US 9370803 A 19930603; US 96659937 A 19960607; US 97970425 A 19971114

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 4037724	A		19		
JP 11337553	A		14	G01N-033/551	Div ex application JP 90412005
US 6027943	A			G01N-033/543	Div ex application US 89456982 Cont of application US 9370803 Div ex application US 96659937 Div ex patent US 5252496 Cont of patent US 5559041 Div ex patent US 5728587
JP 4289456	A		15	G01N-033/543	
US 5252496	A		12	G01N-033/544	
CH 684715	A5			G01N-033/53	Div ex application CH 903938
US 5559041	A		13	G01N-033/543	Div ex application US 89456982 Div ex patent US 5252496
US 5728587	A		13	G01N-033/543	Div ex application US 89456982 Cont of application US 9370803 Div ex patent US 5252496 Cont of patent US 5559041
JP 2977616	B2		14	G01N-033/543	Previous Publ. patent JP 4289456
GB 2239313	B			G01N-033/543	
GB 2239314	B			G01N-033/532	
IT 1240536	B			A61B-000/00	
CH 684130	A5			G01N-033/53	

Abstract (Basic): DE 4037724 A

Immunochemical assay device comprises: (a) a base; (b) on the base, (i) a reservoir pad (10) of sufficient porosity and vol. to take up and distribute a test sample, (ii) a membrane (16) with wicking action, sepd. from (10) and able to absorb a significant portion of the sample taken up by (10), and (iii) at least one filter zone (FZ) which connects and touches (10) and (16); and (c) at least one immobilised substance (I) present in at least one zone of (16) and able to bind a specific ligand-receptor complex (LCR) present in the sample so as to produce an indication of the assay result. The filter zone (1) touches a surface of (10) which is small relative to its vol.

so that the flow of liq. sample from (10) to FZ is controlled and (2) permits flow of LRC from (10) to (16) but not that of larger components.

Also new are immunochemically active markers and their aq. suspensions, consisting of fine particles of carbon black on which a component is immobilised by adsorption. The component is attached (remote from the adsorption site) to a ligand or ligand- binding molecule. The component is esp. an immunologically active hapten, antigen or antibody.

USE/ADVANTAGE - FZ improves sensitivity compared with known migration-type assay devices because: (1) components such as blood cells are captured without impairing flow of analyte, and (2) overflow of sample is prevented. Assays of both the concurrent and sandwich type can be performed; in the first case FZ also contains a labelled analyte. (19pp Dwg.No.4/6

Abstract (Equivalent): GB 2239314 B

An immunochemical label comprising particulate carbon back on which is adsorptively immobilised a component which terminates distally from the point of adsorption with an immunologically active ligand or ligand binding molecule, for reaction between said immunological ligand or said ligand binding molecule and an analyte.

Dwg.0/0

GB 2239313 B

An immunochemical assay device comprising: a base member; an array disposed on said base member, said array comprising: (i) a reservoir pad having sufficient porosity and volume to receive and contain a liquid sample on which the assay is to be performed; (ii) a wicking membrane disposed distally to said reservoir pad, said wicking membrane having sufficient porosity and volume to absorb a substantial proportion of the sample received in said reservoir pad; and (iii) at least one filter zone interposed between and contiguous with said wicking membrane and said reservoir pad, said filter zone being (a) contiguous across a surface of said reservoir pad which is sufficiently small with respect to the volume of said reservoir pad to meter the passage of the liquid sample from said reservoir pad to said filter zone and (b) operable to permit passage of any specific ligand-receptor complex in said sample from said reservoir pad to said wicking membrane while impeding passage of larger components then contained in said sample; and (iv) at least one immobilised substance disposed in at least one zone of said wicking membrane and defining assay indicia, said immobilised substance being operable to bind a specific ligand-receptor complex contained in the sample to form said assay indicia.

Dwg.0/0

Abstract (Equivalent): US 5728587 A

Immunochemical assay device comprises: (a) a base; (b) on the base, (i) a reservoir pad (10) of sufficient porosity and vol. to take up and distribute a test sample, (ii) a membrane (16) with wicking action, sepd. from (10) and able to absorb a significant portion of the sample taken up by (10), and (iii) at least one filter zone (FZ) which connects and touches (10) and (16); and (c) at least one immobilised substance (I) present in at least one zone of (16) and able to bind a specific ligand-receptor complex (LCR) present in the sample so as to produce an indication of the assay result. The filter zone (1) touches a surface of (10) which is small relative to its vol. so that the flow of liq. sample from (10) to FZ is controlled and (2) permits flow of LRC from (10) to (16) but not that of larger components.

Also new are immunochemically active markers and their aq. suspensions, consisting of fine particles of carbon black on which a component is immobilised by adsorption. The component is attached

(remote from the adsorption site) to a ligand or ligand- binding molecule. The component is esp. an immunologically active hapten, antigen or antibody.

USE/ADVANTAGE - FZ improves sensitivity compared with known migration-type assay devices because: (1) components such as blood cells are captured without impairing flow of analyte, and (2) overflow of sample is prevented. Assays of both the concurrent and sandwich type can be performed; in the first case FZ also contains a labelled analyte.

Dwg.1/6

US 5559041 A

An immunochemical assay device comprising: a base member;

an array disposed on said base member, said array comprising:

(i) a reservoir pad having sufficient porosity and volume to receive and contain a liquid sample on which the assay is to be performed; (ii) a wicking membrane disposed distally to said reservoir pad, said wicking membrane having sufficient porosity and volume to absorb a substantial proportion of the sample received in said reservoir pad; and (iii) at least one filter zone which is separate and distinct from said reservoir pad and wicking membrane , and interposed between and contiguous with said wicking membrane and said reservoir pad, said filter zone having impregnated therein a labelled immunochemical component capable of binding to an analyte of interest in said sample to form an immuno-complex, said filter zone being operable to permit passage of any specific immuno-complex to said wicking membrane while impeding passage of larger components then contained in said sample; and

at least one immobilized substance disposed in at least one assay indicia zone of said wicking membrane downstream of said reservoir pad and defining assay indicia, said immobilized substance being operable to bind a specific immuno-complex contained in the sample to form said assay indicia.

Dwg.0/6

US 5252496 A

Immunochemical reagent comprises finely divided carbon black particles which have been pretreated with dextran (Mr 10,000-500,000), then linked through fluorescein isocyanate to an immunological agent, e.g. a hapten, antigen or antibody.

USE - The prods. are specific immunological reagents for rapid clinical analysis and diagnosis.

Dwg.1/6

5/AB/15 (Item 15 from file: 351)
DIALOG(R)File 351:Derwent WPI
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008483038
WPI Acc No: 1990-370038/199050
Related WPI Acc No: 1989-101689
XRAM Acc No: C90-160930
XRPX Acc No: N90-282156
Storage and reaction appts. for detecting bindable analyte - esp. HIV antibody, has membrane carrying immobilised receptor placed over liq. absorber
Patent Assignee: E-Y LAB INC (EYEY-N); CHU A E (CHUA-I); CHUN P K (CHUN-I); YEUNG S C C (YEUN-I)
Inventor: CHU A E; CHUN P K; YEUNG S C C; TEUNG S I
Number of Countries: 016 Number of Patents: 007
Patent Family:
Patent No Kind Date Applicat No Kind Date Week

EP 402023	A	19901212	EP 90305747	A	19900525	199050 B
CA 2017329	A	19901126				199108
JP 3073854	A	19910328	JP 90136911	A	19900525	199119
EP 402023	B1	19941026	EP 90305747	A	19900525	199441
DE 69013578	E	19941201	DE 613578	A	19900525	199502
			EP 90305747	A	19900525	
ES 2063267	T3	19950101	EP 90305747	A	19900525	199508
US 5571667	A	19961105	US 87103845	A	19871001	199650
			US 89358786	A	19890526	
			US 91798346	A	19911121	
			US 92958537	A	19921008	
			US 9389429	A	19930708	

Priority Applications (No Type Date): US 89358786 A 19890526; US 87103845 A 19871001; US 91798346 A 19911121; US 92958537 A 19921008; US 9389429 A 19930708

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 402023	A				
Designated States (Regional): BE CH DE DK ES FR GB GR IT LI NL SE					
EP 402023	B1	E	16	G01N-033/543	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI NL SE					
DE 69013578	E			G01N-033/543	Based on patent EP 402023
ES 2063267	T3			G01N-033/543	Based on patent EP 402023
US 5571667	A		11	C12Q-001/70	CIP of application US 87103845
					Cont of application US 89358786
					Cont of application US 91798346
					Cont of application US 92958537
					CIP of patent US 5006464

Abstract (Basic): EP 402023 A

Storage and reaction appts. for detecting/determining a bindable target substance (I) in a liq. sample comprises (1) liq.-permeable, porous reaction membrane with a receptor (R) which can bind (I) directly or indirectly, immobilised on at least its upper surface; (2) a body of material which can absorb liq., adjacent to the lower surface of the membrane; (3) a container for the membrane and absorbant , in which the top wall defines a fluid port adjacent to R and a fluid seal, at the periphery of the port, between the top wall and membrane (which together define an open space to the periphery of the seal).

The seal is a continuous rim projecting from the top wall towards the membrane, the rim and membrane being in contact (under compression) to prevent any leakage between rim and membrane. The membrane is a strip and the fluid port is an elongated slot. The rim contacts this strip so that a portion of the sides of the strip is exposed to the open space.

USE/ADVANTAGE - The appts. is esp. used to detect HIV antibody (in which case (R) is recombinant HIV protein or viral lysate) in biological fluids. More generally, a very wide range of immunoglobulins, microorganisms, hormones and viruses can be detected, and the same appts. can be used for hybridisation tests. The device is simple to use and an assay takes less than 1 hr, typically only 5-10 min. (15pp Dwg.No.3/5

Abstract (Equivalent): EP 402023 B

A storage and reaction apparatus for use in assays for the detection and/or determination of a bindable target substance in a liquid sample suspected of containing such substance, characterised in that it comprises (a) a liquid-permeable, porous reaction membrane strip having an upper and lower surface, at least said upper surface having immobilised thereon a receptor capable of directly or

indirectly binding to the bindable substance, said receptor comprising a protein blot long said strip, (b) a body of absorbent material capable of absorbing liquid, said body having a surface located adjacent to the lower surface of the reaction membrane , and (c) container means for said reaction membrane and absorbent material, including a top wall defining a fluid port in the form of an elongate slot adjacent said receptor and including fluid seal means disposed at the periphery of the fluid port defining a seal between said container top wall and reaction membrane , said top wall and membrane defining an open space to the periphery of said seal means.

Dwg.0/5

Abstract (Equivalent): US 5571667 A

A storage and reaction apparatus for use in assays for determining bindable target substances comprising:

(a) a liquid-permeable, porous, elongate reaction membrane strip comprising an upper and lower surface, at least said upper surface comprising immobilized proteins capable of specifically binding to said target substances, said proteins being positioned on said strip so as to correspond to electrophoretically resolved proteins which have been transferred to said strip and which are capable of specifically binding to said target substances,

(b) a body of absorbent material capable of absorbing liquid, said body having a surface located adjacent to the lower surface of the reaction membrane strip, and

(c) a container means for said reaction membrane strip and said absorbent material comprising a top wall defining a fluid port in the form of an elongate slot adjacent said membrane strip and further comprising a fluid seal means peripherally disposed at said fluid port defining a seal between said container top wall and said reaction membrane strip.

(Dwg.0/3

5/AB/16 (Item 16 from file: 351)
DIALOG(R)File 351:Derwent WPI
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007836577
WPI Acc No: 1989-101689/198914
Related WPI Acc No: 1990-370038
XRAM Acc No: C89-044820
XRPX Acc No: N89-077574

Assay device for a bindable target substance in a liquid - having a separator with ports to control liquid flow from a membrane carrying a receptor

Patent Assignee: E-Y LAB INC (EYEY-N); E-Y LABS INC (EYEY-N)
Inventor: CHU A E; CHUN P K; YEUNG S C C
Number of Countries: 015 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 310406	A	19890405	EP 88309077	A	19880930	198914	B
JP 1140066	A	19890601	JP 88247271	A	19880930	198928	
US 5006464	A	19910409	US 87103845	A	19871001	199117	
EP 310406	B1	19940601	EP 88309077	A	19880930	199421	
DE 3889833	G	19940707	DE 3889833	A	19880930	199427	
			EP 88309077	A	19880930		
ES 2053753	T3	19940801	EP 88309077	A	19880930	199432	
JP 2644004	B2	19970825	JP 88247271	A	19880930	199739	

Priority Applications (No Type Date): US 87103845 A 19871001
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 310406	A	E	14		
Designated States (Regional): BE CH DE ES FR GB GR IT LI LU NL SE					
EP 310406	B1	E	20	G01N-033/543	
Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE					
DE 3889833	G			G01N-033/543	Based on patent EP 310406
ES 2053753	T3			G01N-033/543	Based on patent EP 310406
JP 2644004	B2		12	G01N-033/543	Previous Publ. patent JP 1140066

Abstract (Basic): EP 310406 A

A storage and reaction appts. for use in assays for the detection and/or detn. of a bindable target substance (I) in a liq. sample comprises. (a) a liq.-permeable, porous reaction membrane, at least the upper surface having immobilised a receptor capable of directly or indirectly binding to (I), (b) a body of absorbent material capable of absorobing a liq., the body having a surface located adjacent to the lower surface of the porous reaction membrane, (c) a separator for isolating liq. flow from the lower surface of the membrane to the upper surface of the adsorbent body and (d) a port through the separator for directing the flow of liq. from the lower surface of the membrane through the separator, whereby liq. sample applied to the upper surface of the reaction membrane will permeate in a selected flow pattern to its lower surface and be directed to at least one selected portion of the surface of the body of absorbent material.

ADVANTAGE - The appts. can optimise the kinetics of the reaction by directing flow of the sample either away from the centre of the immobilised receptor of towards it by selection of the location and type of parts. High viscosity samples, such as serum, which could otherwise tend to clog the membrane can be directed to flow away from the centre. Low viscosity sample, such as urine, in which there may be a low concn. of (I) can be directed to flow towards the centre.

Dwg.8/9

Abstract (Equivalent): EP 310406 B

A storage and reaction apparatus for use in assays for the detection and/or determination of a bindable target substance in a liquid sample suspected of containing such substance, comprising: (a) a liquid-permeable, porous reaction membrane having an upper and lower surface, at least one defined region of said membrane or at least said upper surface thereof having immobilised thereon a receptor capable of directly or indirectly binding to the bindable target substance; (b) a body of absorbent material capable of absorbing a liquid, said body having a surface located adjacent to the lower surface of the porous reaction membrane ; (c) separating means between the said lower surface of the porous reaction membrane and the said upper surface of the absorbent material body for substantially isolating liquid flow therebetween and (d) port means through said separating means for substantially directing the flow of liquid from the lower surface of said porous reaction membrane through said separating means; whereby liquid sample applied to the upper surface of said porous reaction membrane will permeate in a selected flow pattern to its lower surface and be substantially directed to at least one selected portion of the surface of said body of absorbent material.

Dwg.1/9

Abstract (Equivalent): US 5006464 A

A bindable target substance (BTS) is detected in a liquid sample using an assaying apparatus consisting of (A) a porqus, liquid permeable reaction membrane contg. on an exposed surface area on its upper side immobilised a receptor able to bind (in)directly the BTS, (B) an absorbent for the liquid close to the lower surface of the membrane , (C) means to prevent the flow of liquid from the lower

surface of the membrane to the upper surface of the absorbent , and (D) ports through (C) to direct the flow of liquid from the lower surface of the membrane through (C) into the absorbent . The membrane pref. consists of nitrocellulose and is bonded to a liquid permeable support material, esp. of paper, fibreglass or polyester. The support also includes a liquid impermeable sheet.

USE/ADVANTAGE - For detection of an analyte in a biological specimen; the sensitivity and separation of the apparatus is improved while controlling the liquid flow characteristics of the apparatus. (13pp

5/AB/17 (Item 17 from file: 351)
DIALOG(R)File 351:Derwent WPI
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007813176
WPI Acc No: 1989-078288/198911
XRPX Acc No: N89-059819
Lateral flow chromatographic binding assay device - indicates presence of assayed substance bound to reagent
Patent Assignee: ABBOTT LAB (ABBO)
Inventor: GORDON J; PUGH C S G
Number of Countries: 017 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 306772	A	19890315	EP 88113756	A	19880824	198911	B
JP 1113662	A	19890502	JP 88227339	A	19880909	198923	
AU 8821753	A	19890316				198924	
US 4956302	A	19900911	US 89355043	A	19890515	199039	
EP 306772	B1	19930310	EP 88113756	A	19880824	199310	
DE 3879048	G	19930415	DE 3879048	A	19880824	199316	
			EP 88113756	A	19880824		
ES 2039533	T3	19931001	EP 88113756	A	19880824	199344	
CA 1336577	C	19950808	CA 576874	A	19880909	199539	

Priority Applications (No Type Date): US 8795801 A 19870911; US 89355043 A 19890515
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 306772	A	E	8		
Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE					
EP 306772	B1	E	11	G01N-033/558	
Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE					
DE 3879048	G			G01N-033/558	Based on patent EP 306772
ES 2039533	T3			G01N-033/558	Based on patent EP 306772
CA 1336577	C			C12Q-001/68	

Abstract (Basic): EP 306772 A

The assay device has a plastic container (10) which has three compartments, with a nitrocellulose (13) tape along the bottom of them. The liquid to be analysed is poured into the first compartment (18) and is carried, by chromatographic action on the nitrocellulose fibres, across the bottom of the second compartment and into the third, where it is absorbed in blotter (19).

In the second compartment or well (16) is a reagent chosen to bind to the substance to be detected. An appropriate indicator is then added to the second well and by interacting with the substance bound to the reagent, it shows, by a colour change or in some other recognizable way, the presence of the substance.

ADVANTAGE - Lateral transport through chromatographic medium is

efficient way to analyse small quantities of liquid available.

3/3

Abstract (Equivalent): EP 306772 B

A test device for determining the presence or amount of an analyte substance in a sample by means of one or more specific binding reactions comprising; a chromatographic medium having capillarity and the capacity for chromatographic solvent transport of one or more reactive sample components and non- immobilized reagents including a reaction site at which is present an immobilized reagent capable of binding a member from the group consisting of said analyte substance and a labelled specific binding material, a sample application means located adjacent to said chromatographic medium and offset upstream from said reaction site, and a liquid absorption means offset downstream from said reaction site. (Dwg.1/3)

Abstract (Equivalent): US 4956302 A

The lateral flow chromatographic binding assay device includes a chromatographic medium having capillarity and the capacity for chromatographic solvent transport of one or more reactive sample components. Non- immobilised reagents are provided which includes a reaction site which is present an immobilised reagent capable of binding a member from the group consisting of the analyte substance and a labelled specific binding material.

The devices also include a sample application device located adjacent to the chromatographic medium and offset upstream from the reaction site. A liq. absorption device is offset downstream from the reaction site.

USE - For detection of analyte substances. (7pp)i

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